



PATENT APPLICATION

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q76266

Hiroyuki ASAOKO, et al.

Appln. No.: 10/608,625

Group Art Unit: 1645

Confirmation No.: 9860

Examiner: Unknown

Filed: June 30, 2003

For: MODIFIED REDUCTASE AND ITS GENE, AND USE THEREOF

INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. §§ 1.97 and 1.98

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

<u>Serial No.</u>	<u>Applicant's Name</u>	<u>Filing Date</u>
10/608,533	ASAOKO et al.	June 30, 2003
10/617,034	ITOH et al.	July 11, 2003

1. European Patent Application No. 0 400 239 A1, published December 5, 1990, to Daito Koeki Kabushiki Kaisha.
2. European Patent Application No. 0 501 353 A2, published September 2, 1992, to Takeda Chemical Industries, Ltd.
3. European Patent Application No. 0 967 271 A1, published December 29, 1999, to Kaneka Corporation.

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INFORMATION DISCLOSURE STATEMENT

4. European Patent Application No. 1 013 758 A2, published June 28, 2000, to Daicel Chemical Industries, Ltd.
5. European Patent Application No 1 201 647 A2, published May 2, 2002, to Sumitomo Chemical Co., Ltd.
6. European Patent Application No. 1 213 354 A2, published June 12, 2002, to Sumtiomo Chemical Co., Ltd.
7. ITOH et al., "Chiral alcohol production by NADH-dependent phenylacetaldehyde reductase coupled with *in situ* regeneration of NADA," *Eur. J. Biochem.* 269, 2002, pp. 2394-2402.
8. ITOH et al., "Chiral alcohol production by  $\beta$ -ketoester reductase from *Penicillium citrinum* coupled with regeneration system of NADPH", *Journal of Molecular Catalysis B Enzymatic*, Vol. 22, No. 3-4, June 2, 2003, pp. 247-248.
9. Japanese Patent Application No. 02-312593, published December 27, 1990, to Daito Corp., with English Abstract.
10. Japanese Patent No. 2532299, issued June 27, 1996, to Fuji Rebio Inc., with English Abstract.
11. KOMETANI et al., "Baker's Yeast Mediated Bioreduction. A New Procedure Using Ethanol as an Energ Source", *Chemistry Letters*, 1989, pp. 1465-1466.
12. SPILIOOTIS et al., "Enhanced Optical Purity of 3-Hydroxyesters Obtained by Baker's Yeast Reduction of 3-Ketoesters", *Tetrahedron Letters*, Vol. 31, No. 11, 1990, pp. 1615-1616.
13. U.S. Patent Application Publication No. 2003/0186400 A1, published October 2, 2003, to Asako et al.
14. U.S. Patent No. 4,455,373, issued June 19, 1984, to Higgins.
15. WEI et al., "Baker's yeast mediated mono-reduction of 1,3-cyclohexanediones bearing two identical C(2) substituents", *Tetrahedron: Asymmetry*, Vol. 12, 2001, pages 229-233.

One copy of each of the listed documents is submitted herewith.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action

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INFORMATION DISCLOSURE STATEMENT

on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after filing a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

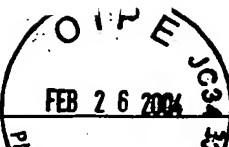
  
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Date: February 26, 2004

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet	1	of	1	Attorney Docket Number	Q76266
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*Complete if Known*

Application Number	10/608,625
Confirmation Number	9860
Filing Date	June 30, 2003
First Named Inventor	Hiroyuki ASAOKO
Art Unit	1645
Examiner Name	Unknown

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
		US 2003/0186400	A1	10-02-2003	Asako et al.
		US 4,455,373	A	06-19-1984	Higgins
		US			
		US			
		US			

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		EP	0 400 239	A1	12-05-1990	Daito Koeki Kabushiki Kaisha	
		EP	0 501 353	A2	09-02-1992	Takeda Chemical Industries, Ltd.	
		EP	0 967 271	A1	12-29-1999	Kaneka Corporation	
		EP	1 013 758	A2	06-28-2000	Daicel Chemical Industries, Ltd.	
		EP	1 201 647	A2	05-02-2002	Sumitomo Chemical Co., Ltd.	
		EP	1 213 354	A2	06-12-2002	Sumitomo Chemical Co., Ltd.	
		JP	02-312593	A	12-27-1990	Daito Corp.	Abstract
		JP	2532299	B2	06-27-1996	Fuji Rebio	Abstract

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
		U.S. Patent Application No. 10/608,533, to ASAOKO et al., filed June 30, 2003	
		U.S. Patent Application No. 10/617,034, to ITOH et al., filed July 6, 2003	
		ITOH et al., "Chiral alcohol production by NADH-dependent phenylacetaldehyde reductase coupled with <i>in situ</i> regeneration of NADA," <i>Eur. J. Biochem.</i> 269, 2002, pp. 2394-2402	
		ITOH et al., "Chiral alcohol production by $\beta$ -ketoester reductase from <i>Penicillium citrinum</i> coupled with regeneration system of NADPH", <i>Journal of Molecular Catalysis B Enzymatic</i> , Vol. 22, No. 3-4, June 2, 2003, pp. 247-248	
		KOMETANI et al., "Baker's Yeast Mediated Bioreduction. A New Procedure Using Ethanol as an Energy Source", <i>Chemistry Letters</i> , 1989, pp. 1465-1466	
		SPILIOTIS et al., "Enhanced Optical Purity of 3-Hydroxyesters Obtained by Baker's Yeast Reduction of 3-Ketoesters", <i>Tetrahedron Letters</i> , Vol. 31, No. 11, 1990, pp. 1615-1616	
		WEI et al., "Baker's yeast mediated mono-reduction of 1,3-cyclohexanediones bearing two identical C(2) substituents", <i>Tetrahedron: Asymmetry</i> , Vol. 12, 2001, pages 229-233	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov). MPEP 901.04 or follow the hyperlink from the title of the document to the intranet. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.